

AMENDMENTS TO THE SPECIFICATION:

Please add the following *new* paragraph on page 1, between lines 2 and 3:

CROSS-REFERENCE TO RELATED APPLICATIONS

This U.S. National stage application claims priority under 35 U.S.C. §119(a) to Japanese Patent Application No. 2004-140696, filed in Japan on May 11, 2004 the entire contents of which are hereby incorporated herein by reference.

Please replace paragraph [0002] with the following rewritten version:

[0002] As a conventional example of a fluid machine, Patent Publication 1 discloses a compressor having an eccentric rotation piston mechanism achieved by a cylinder having an annular cylinder chamber and an annular piston which is contained in the cylinder chamber to make eccentric rotation. The fluid machine compresses a refrigerant by making use of volumetric change in the cylinder chamber caused by the eccentric rotation of the piston. See, for example, Japanese Patent Publication No. 06-288358.

Please remove the paragraph at page 1, line 14, as follows:

~~Patent Publication 1: Japanese Unexamined Patent Publication No. H6-288358~~

Please replace the heading at page 1, line 15, with the following rewritten version:

SUMMARY OF THE INVENTION ~~DISCLOSURE OF THE INVENTION~~

Please remove the heading at page 1, line 16 as follows:

~~PROBLEM THAT THE INVENTION IS TO SOLVE~~

Please remove the heading at page 1, line 26 as follows:

~~MEANS OF SOLVING THE PROBLEM~~

Please replace paragraph [0005] with the following rewritten version:

[0005] As shown in FIG. 1, a first aspect of the present invention includes a first rotation mechanism (2F) and a second rotation mechanism (2S), each of which including: a cylinder (21) having an annular cylinder chamber (50); an annular piston (22) which is contained in the cylinder chamber (50) to be eccentric to the cylinder (21) and divides the cylinder chamber (50) into an outer working chamber (51) and an inner working chamber (52); and a blade (23) which is arranged in the cylinder chamber (50) to divide each of the working chambers (51, 52) into a high pressure region and a low pressure region, the piston (22) and the cylinder (21) serving as co-operating parts and any one of the piston (22) and the cylinder (21) being stationary and the other being moving such that the moving part rotates about the stationary part. The first rotation mechanism (2F) and the second rotation mechanism (2S) are arranged to be adjacent to each other with a partition plate (2c) sandwiched therebetween and the two moving parts or the two stationary parts of the first rotation mechanism (2F) and the second rotation mechanism (2S) are arranged such that one of the co-operating parts is provided at one side of the partition plate (2c) and the other is provided at the other side of the partition plate (2c).

Please replace paragraph [0006] with the following rewritten version:

[0006] According to the first aspect of the present invention, when the first and second rotation mechanisms (2F) and (2S) are actuated, the moving parts (21) of the co-operating parts rotate relative to the stationary parts (22) of the co-operating parts to change the volumes of the working chambers (51, 52). Thus, a fluid is compressed or expanded.

Please replace paragraph [0007] with the following rewritten version:

[0007] According to a second aspect of the present invention related to the first aspect of the present invention, the inner working chambers (52) of the cylinder chambers (50) of the first rotation mechanism (2F) and the second rotation mechanism (2S) serve as a low-stage compression chambers and the outer working chambers (51) of the cylinder chambers (50) of

the first rotation mechanism (2F) and the second rotation mechanism (2S) serve as high-stage compression chambers.

Please replace paragraph [0008] with the following rewritten version:

[0008] According to the second aspect of the present invention, a fluid is compressed in two stages in the first rotation mechanism (2F) and the second rotation mechanism (2S).

Please replace paragraph [0009] with the following rewritten version:

[0009] According to a third aspect of the present invention related to the first aspect of the present invention, the outer working chambers (51) of the cylinder chambers (50) of the first rotation mechanism (2F) and the second rotation mechanism (2S) serve as compression chambers and the inner working chambers (52) of the cylinder chambers (50) of the first rotation mechanism (2F) and the second rotation mechanism (2S) serve as expansion chambers.

Please replace paragraph [0010] with the following rewritten version:

[0010] According to the third aspect of the present invention, compression and expansion of a fluid are carried out in the first rotation mechanism (2F) and the second rotation mechanism (2S).

Please replace paragraph [0011] with the following rewritten version:

[0011] According to a fourth aspect of the present invention related to the first aspect of the present invention, the partition plate (2c) serves as the end plates (26) of the co-operating parts (21) of the first rotation mechanism (2F) and the second rotation mechanism (2S).

Please replace paragraph [0012] with the following rewritten version:

[0012] According to a fifth aspect of the present invention related to the first aspect of the present invention, the co-operating part (21) of the first rotation mechanism (2F) and the co-

operating part (21) of the second rotation mechanism (2S) adjacent to the first rotation mechanism (2F) have individual end plates (26) and the partition plate (2c) is formed of the end plates (26) of the co-operating parts (21) of the first and second rotation mechanisms (2F, 2S).

Please replace paragraph [0013] with the following rewritten version:

[0013] According to a sixth aspect of the present invention related to the first aspect of the present invention, the moving co-operating parts (21) of the first and second rotation mechanisms (2F, 2S) are connected to a drive shaft (33) and each of the first rotation mechanism (2F) and the second rotation mechanism (2S) is provided with a compliance mechanism (60) for adjusting the position of the co-operating parts (21, 22) in the axial direction of the drive shaft (33).

Please replace paragraph [0014] with the following rewritten version:

[0014] In the sixth aspect of the present invention, leakage from the ends of the co-operating parts (21) is prevented by the axial compliance mechanism (60).

Please replace paragraph [0015] with the following rewritten version:

[0015] According to a seventh aspect of the present invention related to the first aspect of the present invention, the moving co-operating parts (21) of the first and second rotation mechanisms (2F, 2S) are connected to a drive shaft (33) and each of the first rotation mechanism (2F) and the second rotation mechanism (2S) is provided with a compliance mechanism (60) for adjusting the position of the co-operating parts (21) in the direction orthogonal to the axial direction of the drive shaft (33).

Please replace paragraph [0016] with the following rewritten version:

[0016] In the seventh aspect of the present invention, gaps that occur between the co-operating parts (21) in the radius direction are reduced to a minimum, respectively, by the compliance mechanism (60) for adjustment in the orthogonal direction.

Please replace paragraph [0017] with the following rewritten version:

[0017] According to an eighth aspect of the present invention related to the first aspect of the present invention, the moving parts (21) of the co-operating parts of the first and second rotation mechanisms (2F, 2S) are connected to a drive shaft (33) and a balance weight (75) is provided at part of the drive shaft (33) located between the end plates (26) of the co-operating parts of the first rotation mechanism (2F) and the second rotation mechanism (2S) adjacent to each other.

Please replace paragraph [0018] with the following rewritten version:

[0018] In the eighth aspect of the present invention, the balance weight (75) eliminates imbalance caused by the rotation of the co-operating parts (21).

Please replace paragraph [0019] with the following rewritten version:

[0019] According to a ninth aspect of the present invention related to the first aspect of the present invention, the first rotation mechanism (2F) and the second rotation mechanism (2S) are configured to rotate with a 90° phase difference from each other.

Please replace paragraph [0020] with the following rewritten version:

[0020] In the ninth aspect of the present invention, discharge occurs four times while the drive shaft (33) makes a single rotation. Therefore, torque fluctuations are reduced.

Please replace paragraph [0021] with the following rewritten version:

[0021] According to a tenth aspect of the present invention related to the first aspect of the present invention, in each of the first and second rotation mechanisms (2F, 2S), part of the annular piston (22) is cut off such that the piston (22) is C-shaped, the blade (23) extends from the inner wall surface to the outer wall surface of the cylinder chamber (50) and passes through the cut-off portion of the piston (22) and a swing bushing is provided in the cut-off portion of the piston (22) to contact the piston (22) and the blade (23) via the surfaces thereof

such that the blade (23) freely reciprocates and the blade (23) and the piston (22) make relative swings.

Please replace paragraph [0022] with the following rewritten version:

[0022] In the tenth aspect of the present invention, the blade (23) reciprocates through the swing bushing (27) and the blade (23) swings together with the swing bushing (27) relative to the piston (22). Accordingly, the cylinder (21) and the piston (22) make relative swings and rotations, whereby the rotation mechanisms (2F, 2S) achieve predetermined work such as compression.

Please remove the heading at page 4, line 27 as follows:

~~EFFECT OF THE INVENTION~~

Please replace paragraph [0024] with the following rewritten version:

[0024] According to the fourth aspect of the present invention, the end plates (26) of the co-operating parts (21) of the first and second rotation mechanisms (2F) and (2S) are integrated. Therefore, the co-operating parts (21) are prevented from leaning (overturning). This allows smooth movement of the co-operating parts (21).

Please replace paragraph [0025] with the following rewritten version:

[0025] According to the fifth aspect of the present invention, the cylinder (21) of the first rotation mechanism (2F) and the co-operating part (21) of the second rotation mechanism (2S) are separated. Therefore, thrust losses do not occur and the co-operating parts (21) are moved separately.

Please replace paragraph [0026] with the following rewritten version:

[0026] According to the sixth aspect of the present invention, leakage from the ends of the co-operating parts (21, 22) is surely prevented because the axial compliance mechanism (60)

is provided. In particular, as the two rotation mechanisms (2F, 2S) are provided, the compliance mechanism (60) is simplified and the gaps between the ends of the co-operating parts (21, 22) are reduced.

Please replace paragraph [0027] with the following rewritten version:

[0027] According to the seventh aspect of the present invention, the compliance mechanism (60) for adjustment in the direction orthogonal to the drive shaft (33) is provided. Therefore, the co-operating parts (21) of the first and second rotation mechanisms (2F, 2S) move in the radius direction, thereby adjusting the gaps between the co-operating parts (21) in the radius direction separately. As a result, thrust losses do not occur and the gaps between the co-operating parts (21) in the radius direction are reduced.

Please replace paragraph [0028] with the following rewritten version:

[0028] According to the eighth aspect of the present invention, the balance weight (75) is used. Therefore, the imbalance caused by the rotation of the co-operating parts (21) is eliminated.

Please replace paragraph [0030] with the following rewritten version:

[0030] According to the ninth aspect of the present invention, since the first and second rotation mechanisms (2F, 2S) rotate with a 90° phase difference from each other, discharge occurs four times as the drive shaft (33) makes a single rotation. Therefore, the torque fluctuations are significantly reduced.

Please replace paragraph [0031] with the following rewritten version:

[0031] According to the tenth aspect of the present invention, the swing bushing (27) is provided as a connector for connecting the piston (22) and the blade (23) such that the swing bushing (27) substantially contacts the piston (22) and the blade (23) via the surfaces thereof. Therefore, the piston (22) and the blade (23) are prevented from wearing away and seizing up at the contacting parts during operation.

Please remove the heading at page 7, line 4 as follows:

~~BRIEF EXPLANATION OF REFERENCE NUMERALS~~

Please remove paragraph [0035] as follows:

- [0035] 1—Compressor
10—Casing
20—Compressor mechanism
2F—First rotation mechanism
2S—Second rotation mechanism
21—Cylinder
22—Piston
23—Blade
24—Outer cylinder
25—Inner cylinder
27—Swing bushing
30—Motor (drive mechanism)
33—Drive shaft
50—Cylinder chamber
51—Outer compression chamber
52—Inner compression chamber
60—Compliance mechanism
71—Pin
75—Balance weight

Please replace the heading at page 7, line 24, with the following rewritten version:

~~BEST MODE FOR CARRYING OUT DETAILED DESCRIPTION OF THE~~
INVENTION

Serial No.: New – PCT/ JP2005/008636 Nat'l Phase
Filed: Herewith

Please add the following new heading at page 25, between lines 1 and 2:

WHAT IS CLAIMED IS: